

**AMENDED CLAIMS**

**Received by the International Bureau on 17 November 2003 (17.11.2003)  
original claims 1-12 are replaced by amended claims 1-12**

1. A rotary switch mounted above and below a panel, comprising:  
a detent sub-assembly having a single spring, such detent sub-assembly located above  
the panel; and  
a knob that substantially covers the detent sub-assembly.
2. The panel mounted rotary switch of claim 1, wherein operation of the detent sub-assembly is independent of the knob.
3. The panel mounted rotary switch of claim 1, wherein the spring is coupled to two balls, one on each end of the spring.
4. The panel mounted rotary switch of claim 3, wherein the balls do not extend into the panel.
6. The panel mounted rotary switch of claim 3, further comprising a shaft that extends through the panel and the detent sub-assembly and is coupled to the knob.
7. The panel mounted rotary switch of claim 6, wherein the shaft is further coupled to an electrical contact that contacts a printed circuit board below the panel.
8. The panel mounted rotary switch of claim 7, wherein the detent sub-assembly further comprises a detent sprocket having cylindrical lobes that cooperate with the spring, the shaft, and a rotor to set a switch position.
9. The panel mounted rotary switch of claim 8, wherein the switch position defines an electrical circuit.
10. A panel mounted rotary switch having a fully enclosed detent sub-assembly on a user's side of the panel.
11. A method of selecting an electrical circuit using a panel mounted rotary switch, comprising:

providing a shaft that cooperates with a detent sub-assembly located on a user's side of the panel, wherein the shaft is coupled to an electrical connection on an underside of the panel; and  
selecting the circuit by rotating the shaft thereby causing the electrical connection to contact a printed circuit board in a configuration approximating the circuit.

12. A panel mounted rotary switch, comprising:  
an independent detent sub-assembly located on a user's side of a panel; and  
a shaft that cooperates with the detent sub-assembly to manipulate an electrical connection on an underside of the panel.